

Market review of television sets in Ukraine

Research plan

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1. General Market Description

1.1. Description of the Ukrainian Market

Popularity of HD television sets (HDTV) is a result of powerful promotional campaign organized by manufacturers of household appliances. Literally for several years, vendors have made consumers believe that a modern TV set and a HDTV are inseparable notions. Practically all recent models of flat panel displays can receive HD signal (HDTV-ready). They cost 25 percent more than TV sets with PAL/SECAM or NTSC only. Current tendencies of the market have had an impact on the post 'Soviet' countries, and on Ukraine in particular. For instance, 320,000 LCD TV sets at the cost of 256 million USD were sold in Ukraine in 2007, and in 2006 the segment capacity had hardly reached 100 million USD. About 75 percent of LCDs that are sold in Ukraine support HD technology.

First HD-compatible receivers received signal with a definition that is larger than the standard one (broadcast), but the image was no better. Consumers could use HD video players or HD video receivers, but they still failed to have the promised high definition picture.

HDTVs-ready have followed them. Nevertheless, they also do not ensure full value HD picture. Number of pixels in the HD-ready picture with the definition 1280 x 720 pixels reaches one million. It is about half as large as Full HD – full value television with high definition with a picture 1920 x 1080 pixels.

Models available in the market support HDTV and are equipped with Automatic Picture Control system that is a small sensor equipped with camera which can register illumination (lighting) parameters in the room and automatically regulate screen brightness (saturation).

The major part of the market of modern TV sets is occupied by LCD models (without taking into consideration CRTs which are gradually pushed to the sidelines). It is conditioned by several reasons: LCDs are more power saving; picture is better from the point of view of quality than in CRTs; production technologies are simpler and cheaper than those for plasma and OLED prototypes.

1.2. Classification of Home Television Sets (share in the market, %)

Depending on the technology applied, current TV sets may be divided into four types: ordinary with cathode-ray tube (CRT), projection (CRT, LCD or projector may be used as a source of picture), plasma and LCD.

Diagram 1.2.1

Shares of TV Sets in the Ukrainian Market, %

Type of a television set	2006	2007	2008	2009
Plazma	1,5	2,7	3,8	4,4
LCD	5,4	15,1	28,9	39,2
CRT	93	82,1	67,1	56,1
Projection and portable	0,1	0,1	0,2	0,3

Source: Contracts

- CRT

The history of CRT TV sets numbers over one hundred years. Kinescope (picture tube) is the basic part of a CRT TV set. Kinescope screen is covered with phosphorous containing content. Flow of electrons (electron beam) makes phosphorous pixels light – red, green or blue light. Electron beam moves making a color line consisting of active pixels. Then, it moves down and creates the next one, etc. Speed of beam movement is high, and eye perceives the integral picture.

Technology retains rather large potential. Leaders of TV industry continue producing CRT TV sets to every fancy. Although displays are not so large as projection systems, a wide scope of technical solutions makes CRT an attractive option for clients with different demands. Currently, models with convex, flat and 'super flat' kinescopes are available.

Price of a TV set with a convex kinescope varies within the limits of several hundreds USD. That is why anyone can afford it. Most buyers are entirely satisfied with the features of such a kinescope. Flat kinescopes are deemed a modern tendency in CRT development. LG (Super Flat), Sony (Super Trinitron) are the few brands which offer TV sets with super flat display. Quality of picture on such a screen is comparable to the quality of a picture behind the window glass. Such displays have wide angle and stylish modern design.

Currently, four basic types of large CRT TV sets depending on their size are available - 28, 29, 32 and 34 inches. The second group is the most popular and numerous: number of

models presented in the market is calculated nearly in hundreds. Unlike more compact TV sets, they are the most difficult for choice since they are technically sophisticated.

To make the right choice, it is first of all necessary to determine the format of your future TV set - 4:3 or 16:9. To watch TV programs or video, 4:3 format TV set is the best choice (29, 34 inches); to use DVD, 16:9 display (28 and 32 inches) is more preferable, since it allows experiencing atmosphere of the cinema.

Scan of a CRT TV set is not the least important factor. Normal television broadcasting is performed with transmission of 50 half-frames during one second and with the relevant display of such half-frames on the screen. It means that 50 half-frames are displayed within one second. In this case, we are speaking about 50 Hz technology. In case of 100 Hz technology, every half-frame is stored in TV receiver, and its display is repeated. It results in reduced flickering effect and quieter picture. 100 Hz technology itself has several drawbacks which include but not limited to video capture and digital loop in case of rapid movement of objects. To avoid these drawbacks, different technologies are used, for example, Digital Mastering or Digital Natural Motion.

Some models have in-built processors of home cinema Dolby Pro-Logic and Dolby Digital (with backside acoustics provided) which allow creating home cinema by connecting of video or DVD player. Nevertheless, in spite of the fact that such systems are user friendly, from the point of view of quality, they are worse than systems with additionally connected AV amplifier (receiver) and acoustics.

- Plasma

This term may imply two devices that are indistinguishable from the point of view of exterior, but quite different from the point of view of their essence: plasma TV set and plasma panel. The former has all attributes pertaining to any TV set – it receives TV programs and displays them with sound which is played via in-built speakers. It means that it is a ready for use self-sufficient product. The matter is quite different with plasma panels: panel means simple screen (or display) which does not have any in-built TV tuner, and it is not a TV set at all.

The principle of functioning of any plasma screen/display (PDP - Plasma Display Panel) is based on the controlled cold discharge of gas (as a rule, xenon and neon) that is in ionization state. It is all called 'cold plasma' - wherefrom the name comes.

Like everywhere, dot or pixel is a minimum picture unit on the screen. In plasma display, a combination of three subpixels is used to generate color of every separate dot; every such subpixel corresponds to one of three main RGB colors (Red, Green and Blue). Cells are located between two glasses with distance between them equaling to 0.1 mm (100 micron). During the electric pulse on electrodes, part of charged ions starts UV emission. In most cases, radiation or emission band depends on gas used in a certain model.

UV rays act upon special fluorescent covering which emits visible light. UV rays are very dangerous for human eye, but in this case up to 97 percent of harmful emission is absorbed by external glass. Brightness and color saturation may be regulated by simple change of control power: the more intensive power is, the more photons are radiated by gas, the more intensive light fluorescent film has, the brighter picture on the display we obtain.

Operational life of plasma panel or TV set does not mean the time of plasma breakdown, it means an expected time of loss of initial image intensity and brightness. Nevertheless in spite of such a parameter, it is not worth concentrating on it specially, since life of filling (electronic or technical), which is available in plasma in large quantities, is essential as well.

According to their sizes, plasma TV sets are conditionally divided into three basic groups – less 40", 41"–49" and 50" and more. The second group has the largest number of products where plasma panels of almost all well-known manufacturers are available (especially it concerns 42"). It is connected with the lack of benefit of production of small plasma panels and insufficient demand for large plasmas (60", 61", 63") on the other hand due to their expensiveness and lack of superiority with regard to definition when compared to smaller panels.

The higher level of intensity and brightness, the better it is for plasma panel and the brighter and more saturate the displayed picture is. Values of brightness for plasma panels are within the range from 450-500 candelas per quarter meter in relatively non-expensive 42- 50" to 1,400-1,500 candelas per quarter meter in more technically updated models. With regard to definition, this parameter directly influences number of pixels on the screen and the 'texture' of the image respectively: the higher the definition is, the more pixels are available and the more homogenous the image will be respectively. The

definition for 42" is 852 x 480 pixels (for non-expensive models) and 1024 x 768 pixels for more upgraded.

The imaging method is an important factor as well. There are two basic imaging methods: interlace and progressive. Unlike the first method – interlace scan that is used in traditional kinescope TV sets, progressive scan ensures such a generation of the video image displayed on the TV screen or panel when every image line is transmitted one by one. In fact, equipment with progressive scan can display twice as many lines in a frame (shot). Consequently, image becomes clearer, effects of flickering of thin horizontal lines, comb effect in case of movement of objects and flickering effect in case of display of static images disappear.

For instance, special antistatic covering is available – it is a special covering of plasma panel display that protects the display itself from electrostatic charge which gathers dust and therefore has a negative impact on human health. Antiglare covering may also be available which decreases reflection of external light from the glass surface of plasma display.

Connectors and ports are also very important factor – list of devices, appliances and units that may be connected to a TV set depends on this factor. It is necessary first of all to pay attention to possibility of connecting acoustics, available connectors for computer, etc. Thus for instance, SCART connector with active RGB outputs and quick switch signal or S-Video connector with separate brightness and color signals, or Y/C output to SCART, as well optical output of sound channels ensure the best quality of video and audio signals.

- LCD

LCDs are very popular in the market and are represented by a large number of models. Even the simplest LCDs are free from main drawbacks of CRTs: flickering, large size and weight, problems with beam convergence, geometrical distortions and harmful electromagnetic emission.

Brightness is one of the most important parameters of LCD. It depends on brightness how comfortable it is to watch TV in the illuminated room – sunny day, bright external light, etc. – e.g. in mostly frequent cases. Minimum value for brightness is currently 350-400 candelas per quarter meter, and it allows watching TV in the illuminated room with more or less acceptable quality. Although, when direct sun rays come in contact with a screen, it is not

comfortable to watch TV. LCD price depends upon its brightness insufficiently, since the latter varies for models with the same size in small range: for example, among 15" models, it is within the limits 400 to 500 candelas per quarter meter, for 26" and 32" it is 450-600 candelas per quarter meter, etc.

Angle is the second key feature of any LCD. The larger angle is, the more comfortable it will be to watch TV from any place in the room. Modern models have an angle equaling to 160 - 170 degrees vertically and horizontally, e.g. in fact the problem concerning the place from which to watch TV is removed. It is possible to place or hang LCD in any place. However, such appliances cost much more than their less modern prototypes. For instance, 15" TV set with angle of 170 degrees vertically and horizontally will cost much more than a TV set with the same size and all other parameters (even with better brightness) but with angles of 160 and 130 degrees vertically and horizontally. This difference will be even more significant for larger sizes.

It is important to have information about connectors on such a TV set. As a rule, manufacturers equip LCD with standard TV/Video connectors such as RGB, SCART, Component, S-Video.

Number of non-operating pixels is a next parameter. These are pixels that are permanently active in any certain state and do not change their color based on the signal. Different manufacturers allow different number of non-operating pixels on a screen, what they specify in their user manuals. As a rule, non-operating pixels are not acceptable for LCDs.

Except for the parameters listed, matrix response time is provided in specifications for every LCD. Any LCD is a translucent type screen that is flashed on from rear side by a white lamp, and the cells of main colors (RGB – red, green, blue) located on three panels of relevant colors let or do not allow light to pass through them depending on power applied. That is why certain picture delay occurs; it is especially seen in case of quick movement of objects. The level of such a delay characterizes response time – the lower value it has, the better it is. Modern models have this parameter varying in the range from 8 ms (1000 ms = 1 s) to 16 ms, and it depends on matrix type and size. Additionally, different manufacturers measure this parameter in a different way (normally, for their benefit).

Definition is the second and not less important feature. As a matter of fact, the best

picture is displayed when matrix physical definition is equal to the definition of the input signal. Due to this, to watch DVD (it is hard to find better quality signal) 720 x 576 pixel definition is ideal but TV sets with such a matrix are yet not available in the market. To watch TV with 4:3 format and small size (up to 26"), 640 x 480 pixel definition is quite enough. Larger displays (over 32") have options for HDTV which is soon going to become the standard of video picture in the whole world. 1920 x 1080 pixel definition is a definition that is good for such a signal, although such TV sets cost a lot.

Lamp life is one more important peculiar feature of alike TV sets. In most modern LCDs it is equal to 60,000 hours subject to maximum brightness (it is enough for about 16 years subject to 10 hour run every day). However, TV sets with less lamp life are available in the market. For comparison: in plasma TV sets brightness reduces quicker for the same time, and for kinescope TV sets (in this case, phosphor burns out) the threshold is— 15,000–20,000 hours, after that quality becomes much poorer.

- LED/OLED

Organic Light-Emitting Diode (OLED) is an organic light emitting diode – device manufactured from organic compounds which effectively emit light by passing electrical current through them. OLED technology is basically applied for manufacture of displays. It is expected that production of such displays will be less cost-consuming than LCD production. Thin-film multilayer structures (several layers of polymers) are used for OLED production.

Brightness. OLED displays ensure brightness from several candelas per quarter meter (night time) to very high brightness levels — over 100 000 candelas per quarter meter, and brightness may be regulated in a very wide dynamic range. Since display lifetime is inversely proportional to its brightness, it is suggested to use moderate brightness levels up to 1000 candelas per quarter meter. When lighting LCD display with bright light beam, glares appear, and picture on OLED display become bright and saturate with any level of lighting (illumination) (even in case of direct contact of sun rays with a display).

Contrast. OLED is a leader here as well. OLED displays have contrast 1000000:1 (LCD 1300:1, CRT 2000:1)

Angles. OLED technology allows watching display from any place and under any angle without any impact on picture quality.

Power consumption. OLEDs consume half as much power as LCDs.

Need for advantages demonstrated by organic displays is growing every year. This fact allows making a conclusion that boom of such a technology is going to take place soon.

LED TV (Light Emitting Diode TeleVision). The term (or concept) was introduced by Samsung for promotion of own line of LCDs with Edge-LED. Usual LCDs use fluorescent lamps (CCFL – Cold Cathode Fluorescent Lamp). It is worth noticing that Samsung is not the sole and not the first manufacturer of such TV sets. Sony, Philips and Sharp also manufacture LCDs with LED lighting.

As a concept, LED TV evokes many disputes with regard to the issue of lawful use thereof, since technically such TV sets are not 100% LED type TV sets. Modern LEDs are larger than pixels of a modern TV set. Therefore, real use of full value LED matrix is possible in very large displays only, on stadiums for example.

From the consumer point of view, LCDs with LED lighting have three enhancements when compared to LCDs with CCFL lighting:

1. Enhanced contrast (unavailable for Edge-LED);
2. Extremely thin (only for Edge-LED);
3. Improved color display (especially RGB-LED).

1.3. Basic Parameters of the Market of Home Television Sets, Calculation of the Market Capacity

Within the recent years, Ukrainian TV set market has experienced explosion in development and growth. The largest market capacity was reached in 2008 (2,821,300 TV sets sold). However, since crisis has become to be felt, growth rates have slowed down significantly. Several reasons are available - the main ones are the following:

– **Unstable situation in the currency market** (since the Ukrainian TV set market basically develops and depends on import of products by major world manufacturers, it may be confidently stated that it also depends on currency fluctuations. In other words, when the foreign currency exchange rate becomes higher with respect to national currency, consumers have less opportunity to buy such goods);

– **Loss of buying capacity** (it is explained by the fact that when crisis has become to be felt, many Ukrainians either have lost constant source of income or it has been reduced significantly. Based upon this, consumers are now attracted by essential goods, and purchases of appliances (for example, TV sets) are postponed to more stable financial situation);

– **Reduction of consumer credits** (consumer credits are considered to be one of the powerful activators of market growth and development);

– **governmental 13 percent markup for goods of non-critical import** (the duty was introduced in March 6, 2009 effective for a half a year with the purpose of stabilization of state trade balance. However, this law has had a negative impact on suppliers of TV sets to Ukraine – they are also forced to raise prices and reduce import)

– **Difficult financial situation for Ukrainian manufacturers** (difficult financial situation of Ukrainian manufacturers has resulted in decrease in production of goods);

– **Reduced financing of new projects** (market development directly depends on updating and enhancement of product lines, for the last two quarters, the tendency towards reduction is observed).

Diagram 1.3.1

Calculation of the Capacity of TV Set Market in Ukraine. 2008 through the first and the second quarters 2009 (thousands TV sets)

	2008	I half 2008	I half 2009
Production	558,8	302,8	158,9
Import	1847,5	903,75	128,4
Export	6,6	3,5	3,1
Carry-over stocks	105	49,8	259,9
Volume	2399,7	1252,6	544,1

* -estimation

According to the data provided by the State Committee of Statistics, export decrease in the first and the second quarters 2009 was about 11.4% when compared to the same period proceeding year. It is conditioned by 47.4% decrease in products manufacture (when comparing figures for the first and the second quarters for 2008 and 2009).

On the whole, it may be stated that market capacity has become more than twice as little when compared to proceeding figures.

2. Production and Sale

2.1. Production and Sales of Home Television Sets (All Types), in numbers

Production of TV sets in Ukraine in January through July 2009 reduced by 54.2% or by 187,900 TV sets when compared to the same period in 2008 (to 158.900 TV sets).

In July, production of TV sets in Ukraine reduced by 75.5%, or by 33,200 TV sets when compared to the same period in 2008 (to 10,800 TV sets).

Diagram 2.1.1

Production of Home Television Sets (All Types) in Ukraine in 2008, in thousands TV sets

Month	Amount
January	61,4
February	57,5
March	62,6
April	32,4
May	42,1
June	46,8
July	44
August	30,3
September	44
October	57,4
November	54
December	26,3

Source: Goskomstat

Monthly dynamics of TV set production in 2008 demonstrates relative stability, seasonal declines in production are observed. However, in December 2008, when crisis phenomena have just started having negative impact, more than twofold decline in production is observed (from 54,000 to 26,300 TV sets).

Decline in production was about 52 percent in relation to the proceeding month.

Diagram 2.1.2

Production of Home Television Sets (All Types) in Ukraine in the first and the second quarters 2009, in thousands TV sets

Month	Amount
January	17,1
February	24,2
March	29,6
April	30,1
May	28,3

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June	18,8
July	10,8

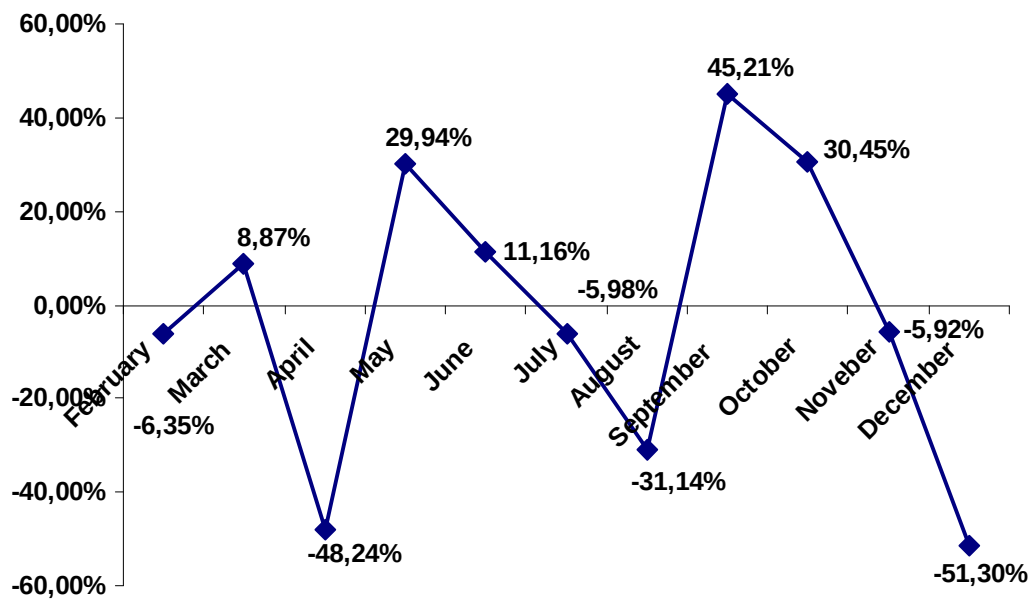
Source: Goskomstat

When comparing production volumes in the first and the second quarters in 2009 with the same period proceeding year, it is worth stating that production became two and a half or even three times as little. The period from March to May is an exception when increase in

production is observed when compared the other months in 2009. It is most likely conditioned by introduction of 13% markup for the goods of non-critical import. It has resulted in an opportunity for the national manufacturers to raise production and occupy part of the market.

Diagram 2.1.3

Production of Home Television Sets (All Types) in Ukraine in 2008, %



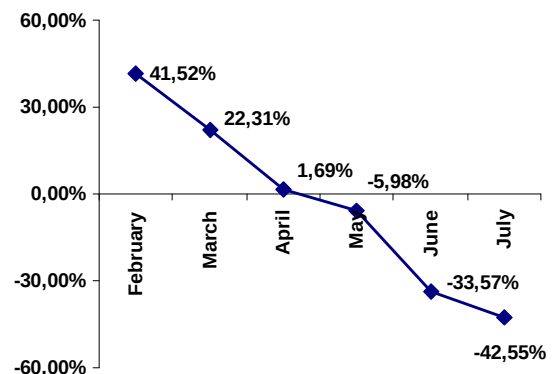
* -estimation

In the end 2008, decline in production is observed. It is mainly conditioned by negative influence of world crisis and difficult financial situation of manufacturing companies. Decline in

production started in November 2008. Towards the end of December, it was equal to 51.3% in relation to the proceeding month.

Diagram 2.1.4

Production of Home Television Sets (All Types) in Ukraine in the first and the second quarters 2009, %



* -estimation

Volumes of production of home TV sets in Ukraine in the first and the second quarters in 2009 were significantly lower than such figures in 2008 (for the same period). Such decline in production was mainly conditioned by negative influence of crisis on the Ukrainian economy. In particular, unstable situation in the currency market has significantly adjusted pricing policy led by manufacturers of home TV sets.

2.2. Production and Sales of Home Television Sets (All Types), in money terms

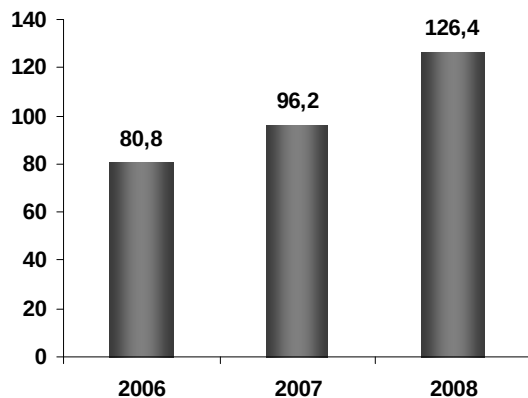
Volume of TV sets in money terms was growing 2006 through 2008. For instance, market capacity of TV sets manufactured and sold in 2006 was 80.8 million USD, and in 2008 it was equal to 126.4 million USD.

There are several reasons for such a growth. They include without limitation:

- annual increase in volumes of products manufactured till 2008;
- price growth due to inflation;
- introduction in the market of innovative and more technically enhanced products.

Diagram 2.2.1

Volume and Sale of Home Television Sets (All Types) 2006 through 2008, in money terms (million USD)

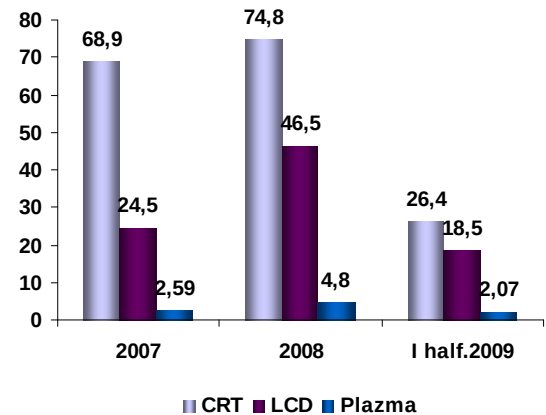


* -estimation

Market growth in 2007 was equal to about 16 percent, and in 2008 growth was at the level of 23.8% when compared to the same period proceeding year.

Diagram 2.2.2

Volume and Sale of Home Television Sets (by certain types) 2006 through 2008, in money terms (million USD)



* -estimation

3. Foreign Trade

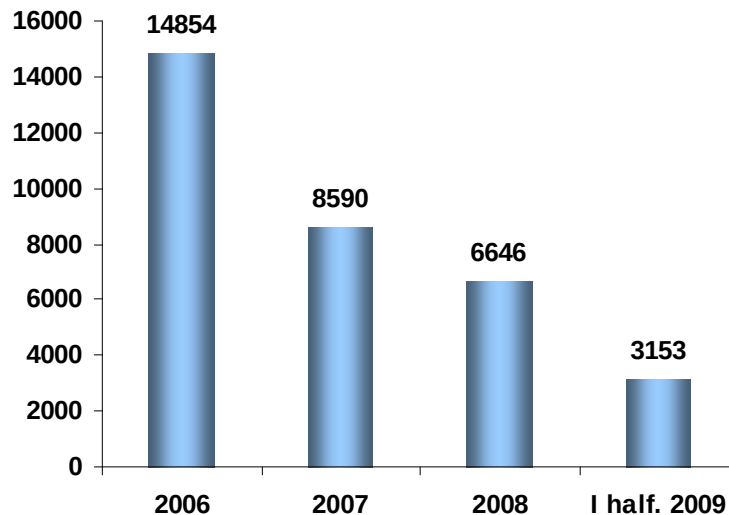
3.1. Export (Structure, Geography)

Structure of export of home TV sets 2008 through the first and the second quarters 2009 is demonstrated in charts 3.1.1 and 3.1.2.

Volumes of export of home TV sets 2006 through 2008 has been gradually decreasing. It has been conditioned by minor competitor ability of Ukrainian products in the world market.

Diagram 3.1.1

Structure of Export of Home Television Sets in Ukraine, 2006 through the first and the second quarters 2009, thousands TV sets



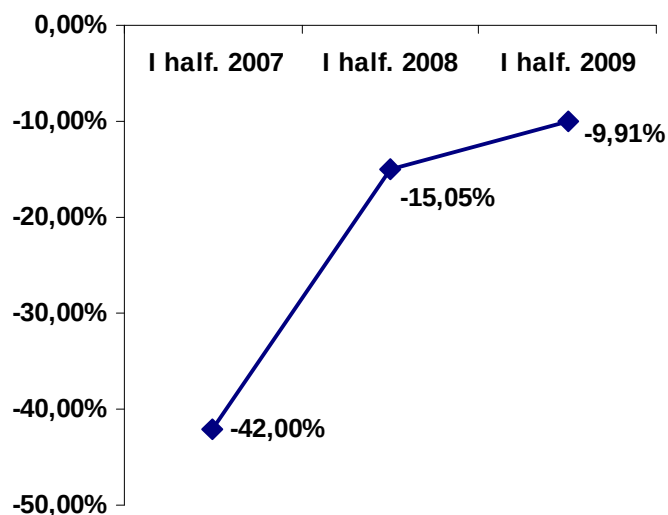
Source: Goskomstat

Since the crisis has become to be felt, consumer preferences have shifted mainly towards the low price segment. In addition, the law was adopted in Ukraine (13% markup for the goods of non-critical import) with the purpose to support national manufacturers and stabilize currency balance in the country. National manufacturers have made efforts to make use of such factors, and they has started negotiating contracts with other countries and sell products that has accumulated in large amounts at their warehouses.

Diagram 3.1.2

Structure of Export of Home Television Sets in Ukraine, 2006 through the first and the second quarters 2009, % TV sets

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* -estimation

However, due to crisis manufacturers has faced rather difficult financial situation, and this factor has not allowed manufacturers to increase export, moreover, export has even decreased.

3.2. Import (Structure, Geography)

the second quarters 2009 is provided in charts 3.2.1 and 3.2.2.

Comparative structure of import of home TV sets for the period 2008 through the first and

Diagram 3.2.1

Structure of Import of Home Television Sets in Ukraine in 2008, by countries

	Unit of measurement	Amount	Cost, thousand USD
TOTAL	kg.	14675384,2	161637,3
	(quantity)	1847919,0	
I. CIS countries	kg.	91030,3	476,6
	(quantity)	5645,0	
AZERBAIJAN	kg.	86,0	0,6
	(quantity)	3,0	
BYELORUSSIA	kg.	75047,0	323,0
	(quantity)	4076,0	
KAZAKHSTAN	kg.	268,0	0,3
	(quantity)	8,0	
KYRGYZSTAN	kg.	48,0	0,0
	(quantity)	1,0	
MOLDAVIA	kg.	35,0	0,2
	(quantity)	1,0	
RUSSIAN FEDERATION	kg.	14773,3	151,1
	(quantity)	1531,0	

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TAJIKISTAN	kg.	100,0	0,1
	(quantity)	2,0	
TURKMENISTAN	kg.	20,0	0,1
	(quantity)	1,0	
UZBEKISTAN	kg.	653,0	1,2
	(quantity)	22,0	
II. OTHER COUNTRIES	kg.	14584353,9	161160,7
	(quantity)	1842274,0	
EUROPE	kg.	4255100,9	81773,3
	(quantity)	263392,0	
AUSTRIA	kg.	29,0	0,1
	(quantity)	1,0	
BELGIUM	kg.	30740,1	552,5
	(quantity)	941,0	
GREECE	kg.	21,0	0,1
	(quantity)	3,0	
DENMARK	kg.	1593,0	23,9
	(quantity)	30,0	
SPAIN	kg.	160325,2	3554,7
	(quantity)	6579,0	
ITALY	kg.	6119,2	105,9
	(quantity)	161,0	
LATVIA	kg.	57,3	0,6
	(quantity)	3,0	
LITHUANIA	kg.	1472,0	27,5
	(quantity)	811,0	
LUXEMBURG	kg.	20,0	0,1
	(quantity)	1,0	
HOLLAND	kg.	8856,0	235,1
	(quantity)	692,0	
GERMANY	kg.	624227,9	9409,2
	(quantity)	41474,0	
NORWAY	kg.	47,0	0,3
	(quantity)	3,0	
POLAND	kg.	528600,6	4783,7
	(quantity)	77858,0	
PORTUGAL	kg.	154,0	1,2
	(quantity)	9,0	
RUMANIA	kg.	1229,3	56,5
	(quantity)	171,0	
SLOVAKIA	kg.	1369129,4	28330,6
	(quantity)	57210,0	
SLOVENIA	kg.	350,5	8,4
	(quantity)	17,0	
UNITED KINGDOM	kg.	73577,3	1893,1
	(quantity)	2194,0	
HUNGARY	kg.	1148234,0	27015,3
	(quantity)	65178,0	

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FINLAND	kg.	543,8	11,2
	(quantity)	171,0	
FRANCE	kg.	2272,6	82,4
	(quantity)	188,0	
ЧЕШКАЯ РЕСПУБЛИКА	kg.	295873,9	5175,3
	(quantity)	9135,0	
CZECH REPUBLIC	kg.	1627,7	505,7
	(quantity)	562,0	
ASIA	kg.	10326868,9	79120,6
	(quantity)	1578436,0	
HONG KONG	kg.	19714,5	121,1
	(quantity)	3495,0	
ISRAEL	kg.	35,0	10,4
	(quantity)	7,0	
INDONESIA	kg.	164825,9	865,3
	(quantity)	20295,0	
CHINA	kg.	6944640,7	47258,7
	(quantity)	1062673,0	
KOREA, REPUBLIC	kg.	1091852,4	15092,8
	(quantity)	312707,0	
MALAYSIA	kg.	1351744,4	5894,5
	(quantity)	63849,0	
MONGOLIA	kg.	85,0	0,1
	(quantity)	3,0	
UNITED ARAB EMIRATES	kg.	100,0	0,3
	(quantity)	3,0	
TAIWAN	kg.	127788,8	2301,9
	(quantity)	51267,0	
THAILAND	kg.	262374,8	1118,4
	(quantity)	13840,0	
TURKEY	kg.	127822,5	1867,1
	(quantity)	41242,0	
JAPAN	kg.	235885,1	4590,1
	(quantity)	9055,0	
AMERICA	kg.	2384,2	266,8
	(quantity)	446,0	
MEXICO	kg.	550,6	47,8
	(quantity)	14,0	
USA	kg.	1833,6	219,0
	(quantity)	432,0	

Source: Goskomstat

Diagram 3.2.2

Structure of Import of Home Television Sets in Ukraine in the first and second quarters 2009, by countries

	Unit of measurement	Amount	Cost, thousand
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MARKET REVIEW OF TELEVISION SETS

			USD
TOTAL	kg.	441920,9	5534,5
	(quantity)	128426,0	
I. CIS countries	kg.	13181,7	53,0
	(quantity)	1658,0	
AZERBAIJAN	kg.	15,0	0,2
	(quantity)	1,0	
BYELORUSSIA	kg.	7991,0	34,5
	(quantity)	405,0	
KAZAKHSTAN	kg.	66,0	0,2
	(quantity)	3,0	
RUSSIAN FEDERATION	kg.	4887,7	17,7
	(quantity)	1239,0	
UZBEKISTAN	kg.	222,0	0,5
	(quantity)	10,0	
II. OTHER COUNTRIES	kg.	428739,2	5481,6
	(quantity)	126768,0	
EUROPE	kg.	34637,1	1121,8
	(quantity)	1641,0	
AUSTRIA	kg.	163,0	1,7
	(quantity)	5,0	
BELGIUM	kg.	32,0	2,1
	(quantity)	5,0	
DENMARK	kg.	2114,2	42,1
	(quantity)	38,0	
SPAIN	kg.	2524,2	44,6
	(quantity)	90,0	
ITALY	kg.	743,7	10,9
	(quantity)	15,0	
HOLLAND	kg.	83,0	0,5
	(quantity)	4,0	
GERMANY	kg.	11766,6	63,8
	(quantity)	494,0	
NORWAY	kg.	44,0	12,3
	(quantity)	4,0	
POLAND	kg.	2311,9	82,3
	(quantity)	239,0	
PORTUGAL	kg.	231,0	20,5
	(quantity)	17,0	
SLOVAKIA	kg.	4979,2	119,0
	(quantity)	234,0	
UNITED KINGDOM	kg.	79,5	5,9
	(quantity)	16,0	
HUNGARY	kg.	6603,9	139,2
	(quantity)	282,0	
FINLAND	kg.	1202,0	26,1

MARKET REVIEW OF TELEVISION SETS

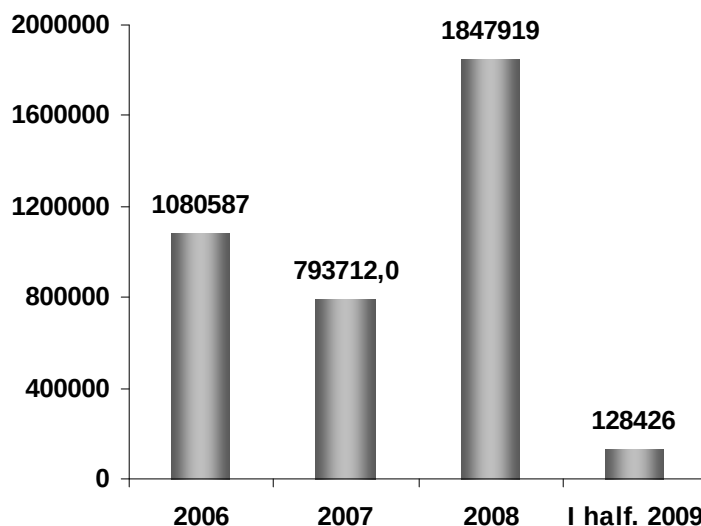
	(quantity)	162,0	
FRANCE	kg.	532,0	381,8
	(quantity)	2,0	
CZECH REPUBLIC	kg.	1102,0	20,5
	(quantity)	33,0	
SWITZERLAND	kg.	125,0	148,6
	(quantity)	1,0	
ASIA	kg.	393499,0	4260,2
	(quantity)	125091,0	
INDONESIA	kg.	9,0	2,1
	(quantity)	6,0	
CHINA	kg.	216792,1	1554,2
	(quantity)	70803,0	
KOREA, REPUBLIC	kg.	90374,1	1999,0
	(quantity)	47874,0	
MALAYSIA	kg.	3473,6	72,5
	(quantity)	213,0	
MONGOLIA	kg.	49,0	1,0
	(quantity)	3,0	
TAIWAN	kg.	3976,8	71,3
	(quantity)	711,0	
THAILAND	kg.	65272,4	255,5
	(quantity)	4644,0	
TURKEY	kg.	3900,6	121,1
	(quantity)	266,0	
JAPAN	kg.	9651,5	183,4
	(quantity)	571,0	
AMERICA	kg.	603,1	99,6
	(quantity)	36,0	
MEXICO	kg.	72,8	14,0
	(quantity)	28,0	
USA	kg.	530,3	85,6
	(quantity)	8,0	

Source: Goskomstat

Diagram 3.2.3

Structure of Import of Home Television Sets in Ukraine 2006 through the first and the second quarters 2009, thousands TV sets

MARKET REVIEW OF TELEVISION SETS



Source: Goskomstat

Import of home TV sets for the period 2006 through 2008 was at a high level. For instance, in 2008 import became more than twice as much as the figures for the proceeding year. The Ukrainian TV set market experienced a real boom supported by consumer credits (loans). Therefore, it may be concluded that the market of imported TV sets in 2008 was at the height of its development (models from medium and high price segments were mostly preferable).

As the crisis has become to be felt, market situation has changed significantly. It became almost unprofitable to import new products to Ukraine. It was conditioned by several reasons.

- governmental 13% duty for the goods of non-critical import;
- reduction of consumer credits and raise of credit interest rates;
- decrease in salaries and reduction of buying capacity as a result of this.

4. Basic Market Operators (TOP 15)

4.1. List and Description of the Basic Market Operators

Seven basic operators are available in the Ukrainian TV set market. They occupy the largest market share. For instance, aggregate share of these operators was equal to 89 percent in the first and the second quarters 2008, but it has somewhat decreased in the first and the second quarters 2009 (to 81 percent) due to crisis phenomena and appearance of minor operators that started aggressive pricing policy with the purpose of occupation of own niche.

Nevertheless, leading operators continue retaining their leading positions in the market due to quality of the goods offered and numerous options and opportunities provided by service centers located almost in every point in Ukraine. Such market operators include without limitation Samsung, LG, Philips, Sony, Sharp, Toshiba and Panasonic.

Minor manufacturers that occupy small market share include without limitation Daewoo, Hitachi, JVC, HANNspree, Pioneer, NEC, Orion, Electron. As a rule, these manufacturers are introduced in one of market segments, i.e. CRT, LCD or plasma. When a manufacturer is available in several segments, the choice provided by such a manufacturer is not large, and it does not exceed 20 to 30 names as a rule.

As a rule, such companies benefit due to reasonable prices, though exceptions are still available.

Samsung

Samsung was founded in 1969. A year of cooperation with Sanyo Electric has led to merger and appearance of Samsung Electronics Corporation.

Company consolidated sales were equal to 103.4 million USD in 2007. Samsung Electronics employs about 150,000 employees working in 134 offices in 62 markets.

The Company has five main units: Digital Appliance Business, Digital Media Business, LCD Business, Semiconductor Business and Telecommunication Network Business.

Address: 3rd level, 3 Spaska St., Kyiv 04070; phone: (044) 490-64-53, 490-64-24, phone/fax: (044) 490-64-94, hot line 8(800)502-00-00.

www.samsung.com.ua

LG

LG Electronics Inc. (headquarters located in Seoul, South Korea) was founded in 1958 and is now a recognized world leader in the sphere of electronics, information and telecommunication technologies.

1996 LG Electronics has established its representation office in Ukraine with the purpose to inform potential buyers about LG products.

In the worldwide scale, sales were equal to 11.3 billion USD in 2008 that is 1.2% higher than proceeding year.

Address: LG Electronics Representation Office, 1 Dniprovsky Spusk, Kyiv.

phone: 8(044)201-43-504

fax: 8(044)201-43-73;

hot line: 8(800)303-00-00

www.ua.lge.com

Philips

The Company was founded in 1891. Nowadays, Philips is one of the major transnational world companies with sales equal to 26.7 billion Euros in 2007. Manufacturing facilities are located in 28 counties, and the products are sold in 150 markets. Costs for research and development were equal to 1.6 billion Euros in 2007, i.e. 6.1 % of total turnover.

Address: 7th level, 4/6 Grinchenko St., Kyiv 01042.

phone : (044)490-98-48, fax 490-98-56.

www.philips.com;

http://www.lighting.philips.com/ua_uk;

Sony

Company was founded in 1946. Sony manufactures audio and video players, mp3-players, DVD-players, projecting and LCD-TVs, monitors and electronic components. Among the company's products such brands as VAIO, Bravia and Walkman.

Sales for the 2008-09 - \$ 80 billion, net loss - \$ 1 billion.

Representative Office in Ukraine - Spasskaya Str, 30, Kiev, 04070

Phone: (044)490-63-11, (044)490-63-29

<http://www.sony.ua>

Contact of the information center for consumers JSC «Sony CIS»

Karamyshevsky passage, 6, Moscow, 123154, Russia,

Phone: 8-(800) 307-66-90, +7 (495) 258-76-50

Sharp

History of Sharp Corporation began in 1912.

Currently, SHARP is a broad network of subsidiaries engaged in manufacturing and

marketing of products, as well as several large research centers and laboratories involved in the development of new technologies.

Sales of Corporation in 2009 (ended March 31, 2009) - \$ 29.45 billion, losses - \$ 1,3 billion

Company does not have a representative Office in Ukraine. The official distributor is MTI (Mega Trade International).

Address: retail center "Caravan", second floor, Lugovaya Str., 12, Kyiv, 04074.

Brand-Manager of MTI IT-distribution Division for LCD TVs SHARP - Elena Biloborodko

e-mail: biloborodko@mti.ua

Phone: 8 (044) 581-51-21 ext.3457

www.sharp.mti.ua

Toshiba

Toshiba (Tokyo Shibaura Electric Co., Ltd.) was founded in 1939 from two companies: Tanaka Engineering Works and Hakunetsusha & Co.

Company's revenues in 2008-2009 (ended March 31, 2009) - \$ 66.239 billion, net income - \$ -3.420 billion (decline of 406.5%). Losses associated with the rejection of the further production of HD DVD-players and recorders. Toshiba lost in the so-called "Format war" technology Blu-ray.

Address: Representative Office is located in Ivan Lepse Str. 4, Kiev. It is opened from July 10, 2008.

Phone: 8 (044) 351-13-16

www.toshibaua.com

Address (exclusive provider of Toshiba technology in Ukraine): Ochakovskaya, 5 / 6 Str. Kyiv, 03151.

Phone: (044) 490-92-78

fax (044) 275-99-99

e-mail: toshiba_department@datalux.ua

Panasonic

Founded in 1918, but was known as Matsushita Electric Factory, renamed Panasonic Corporation in 2008 to strengthen the position of Panasonic brand in the market of household appliances.

Corporation includes 638 enterprises. It owns a controlling interest of JVC. Total staff includes 328 thousand people. Revenues for the year ended March 31, 2009 - \$ 82 billion. Loss was (\$ 4 billion)

Panasonic Information Center in Ukraine established in 2005.

Address: PO Box 441, Kiev-150, Ukraine, 03150, Phone. 8 (044) 490-38-98

www.service.panasonic.ua

/RUS/infocenter.php

Daewoo

Company was founded in March 22, 1967 Daewoo Electronics opened its representative office in Kiev in March 29, 2004.

Company is liquidated at the moment, but the company's products are still sold from warehouses in Ukraine.

www.daewoo.ua

Hitachi

Hitachi was founded in 1910. Company is headquartered in Tokyo. Hitachi group includes 1100 companies:

- Consolidated subsidiaries (450 companies in Japan, 484 - abroad);

- Unconsolidated subsidiaries (79 companies in Japan, 86 - abroad).

In Ukraine there is no official representative office of the company. Service and guarantees issues are solved by shops that sell equipment of the company.

JVC

Company was founded in 1927. From the mid off 60th a controlling interest was owned by Matsushita (owner of the trademark Panasonic).

The company manufactures consumer equipment, computers, audio and video equipment, software, media products. The total staff is 35000 people

Company has a representative office in Ukraine.

Address: Museum Alley, 4, Kyiv, 01001

Phone: (044) 490-70-20, (044) 490-70-18.

www.jvc.ua

www.jvc.ua

HANNspree

Company HANNspree is a global leader specializing in the production of LCD TVs with a unique and exclusive design. Company was founded in 2004 as part of HANNstar corporation. HANNstar corporation is the one of the leading manufacturers in the market of TFT LCD which exists since 1998.

HANNspree employs more than 800 people and 100 engineers engaged in research and development in Taiwan and China. In Europe HANNspree offices are located in 4 countries: Germany, Italy, UK and France, with headquarters in Willich, Germany.

Company does not have a representative office in Ukraine. Sales are conducted through a network of electronics stores such as "New Star», «Technos», etc., as well as online stores.

Pioneer

Pioneer – is a manufacturer of electronic and audio-video equipment for houses, cars, commercial and industrial enterprises. Company

was founded in 1938 in Tokyo. Turnover of the company in 2008-09 - \$ 5.76 billion, losses - \$ 1.34 billion.

Company has branches in 12 countries in Europe. Company does not have a representative office in Ukraine. However, in Ukraine there is an Internet office of «Pioneer hi-fi», which is an official dealer of the company.

Tel: 8 (057) 771-47-27

www.pioneer-hifi.com.ua

e-mail: info@pioneer-hifi.com.ua

NEC

NEC (Nippon Electric Corporation) is a Japanese company which is a manufacturer of electronic, computer and telecommunications equipment. This company is one of the world's largest telecommunications companies. Head office is located in Tokyo. Company started its activities in 1899.

Staff of the company consists of 150 thousand people. Company has 18 offices in 18 countries, 23 plants in 12 countries and 4 research centers in 4 countries, 61 company for marketing in 26 countries. Company's turnover in 2008 was about \$ 41.9 billion, profit was \$ - 2.9 billion

Media-Trade Ukraine is the official dealer of NEC in Ukraine.

Address: Degtyarevskaya Str, 43; Kiev, 03113

Phone: +38 (044) 227-15-82

www.mediatrade.com.ua

e-mail: info@media-trade.com.ua

Orion

A factory for production of radios and other electronic devices was founded in 1913 in Hungary. The company's goal was to create a whole range of electronic devices people use in everyday life.

Company can be contacted through the site, by sending a message. Also through the site a person can get a different kind of advice and can contact partners of the company.

www.orion.ua

Электрон

Concern was founded in 1989.

At the moment this is a concern, which includes 14 scientific - industrial, industrial, and service companies. This is practically the only enterprise in Ukraine, which produces TVs in the country.

Television Works "Elektron" is a subsidiary of JSC «Concern-Electron».

Address: Storozhenko Str., 32, Lvov, 79000

Tel: 8 (032) 239-52-65, 239-53-76

www.electron.lviv.ua

4.2. Structuring of the main operators

Operators of the market can be structured according to the segments where they operate. Segments of the television market are: CRT, LCD, plasma and OLED - Displays.

Diagram 4.2.1

Structuring of operators according to the TVs Segments

Name of operator	CRT	LCD	Plazma	OLED
Samsung	+	+	+	+
LG	+	+	+	-
Philips	-	+	+	-
Sony	-	+	-	+
Sharp	+	+	-	-
Toshiba	-	+	-	-
Panasonic	-	+	+	-
Daewoo	+	-	+	-
Hitachi	-	+	+	-
JVC	+	+	-	-
HANNspree	-	+	-	-
Pioneer	-	+	+	-
NEC	-	-	+	-
Orion	+	+	-	-
Электрон	+	+	-	-

* - estimation

Only 2 companies (Sony and Samsung) have been represented in the segment of the most progressive and expensive products. These companies produce TVs OLED. However, Sony has in the Ukraine market only one model (11 inch TV), while Samsung represented by 11 widescreen TVs with 32 and more inches.

Thus, only Samsung has been represented in all market segments. Other companies focus their production only in certain segments.

4.3. Market shares of the main operators

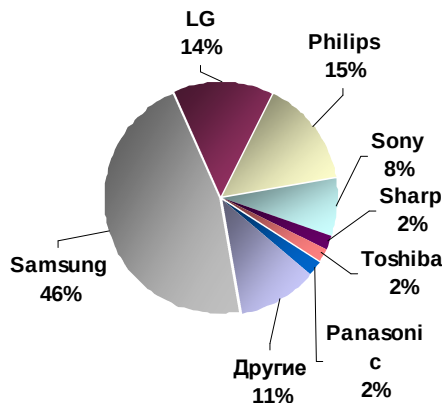
In the TV market of Ukraine there are seven basic operators, which occupy more than 80% of the market.

Shares of the main TV manufacturers for 1 Q 2008 and 2009 are provided on diagrams 4.3.1-4.3.2. It is worth noting while comparing figures that Samsung (market leader) significantly lost their positions this year. This can be explained by the fact that the company's competitors began to promote their products actively. A variety of advertising campaigns and presentations for customers' attraction also contributed to the increase in market share for such manufacturers as Panasonic and Sharp.

Thus, by reducing the share of Samsung in the market, there has been growth in the market shares of other companies.

Diagram 4.3.1

Market shares of main producers in IQ 2008 according to the sales of TVs

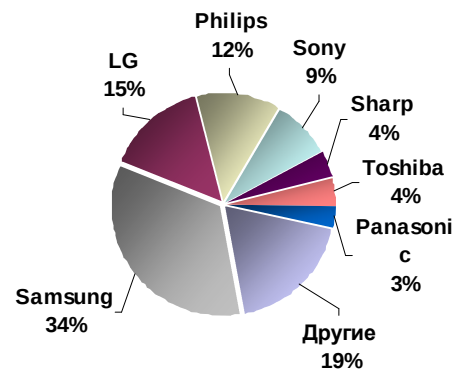


* - estimation

The largest share of the market in 1 Q 2009 has Samsung - 34%. Significantly far behind the leader are companies LG and Philips. They occupy 15% and 12% of the market respectively.

Diagram 4.3.2

Market shares of main producers in IQ 2009 according to the sales of TVs



* - estimation

Comparing figures 1Q 2008 and 1Q 2009, there has been substantial growth in market share of other operators at 8%. Thus, their combined market share grew in 1Q 2009 from 11% to 19%.

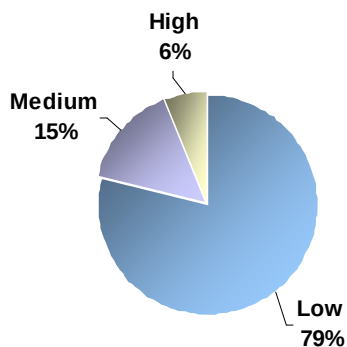
5. Price and pricing on the market

5.1. Price situation on the TV market (analysis of the price structure)

Domestic prices of TV sets in the national currency remained at its pre-crisis level, so demand has shifted in favor of cheaper models. For example, the average cost of LCD-TV up to the sales of IQ 2009 was \$ 670, which is 20.7% below the same period of 2008. If in the IQ of last year, the price of the most popular TV was \$ 750-1000, then up to the same period of 2009 the price is \$ 500-750. Budget models has the largest share of sales in Ukraine, the middle price segment has about 15%, while premium segment has about 6%. Price preference of Ukrainians coincide with global trends: the consumer wants to buy a functional and reliable apparatus for a reasonable price.

Diagram 5.1.1

Price Segmentation in the TV market of Ukraine



*- estimation

To pay declining revenue from sales of devices of mass segment producers try to market expensive models. Manufacturers expect that demand for the premium segment products does not change, because wealthy people are less subjected to crisis. A number of companies in 2009 started to sell ultrafine TVs with LED backlight with diagonals of 40 inches. Price of such devices on the Ukrainian market will start with a mark of \$ 1500.

Domestic market suffered mainly because of the impressive exchange rate fluctuations. In Europe and the U.S. price of TVs in the local currency declines, so manufacturers continue to produce expensive devices and sell them in all

global markets, including Ukraine, because selling cheaper models they get low income. In addition, the domestic market is one of the most profitable. Even despite of the decline in sales volumes, Ukraine gives significant profit to the world's manufacturers.

5.2. Comparative analysis of prices

Calculating the average cost of TV sets the following aspects were taken into consideration: models presented on the market, as well as the length of the diagonal. According to this TV models of the main producers can be classified.

Diagram 5.2.1

Average prices of CRT TV's produced by the leading companies (\$)

Model name	Length of diagonal			
	14	15	21	29
Samsung	-	-	161,4	245,2
LG	-	113	150,6	255,6
Philips	-	-	-	-
Sony	-	-	-	-
Sharp	110	-	151	306
Toshiba	-	-	-	-
Panasonic	-	-	-	-
Daewoo	95	118	148	253,5
Hitachi				
JVC	95	-	155,5	304
HANNspree	-	-	-	-
Pioneer	-	-	-	-
NEC	-	-	-	-
Orion	86	104	129	209,6
Electron	-	-	132,3	247

* - estimation

Thus, we can conclude that the main producers of CRT TVs on the market are: Sharp and LG. These manufacturers offer their products in the TVs segments - 14, 21, 29 inches and 15, 21, 29, respectively. The most expensive are TVs produced by Sharp.

TVs produced by Samsung are in the middle price range.

Diagram 5.2.2

Average prices of LCD TV's produced by the leading companies (\$)

Model name	Length of diagonal					
	до 21	22-25	26-29	30-32	34-42	больше 43
Samsung	353,8	417	473,5	728	1079,3	2184
LG	367,6	391,4	555	651,2	1002,4	1753,3
Philips	371,1	408	625,5	793,2	1483	2241,5
Sony	537,8	554,4	643,2	729	1293,6	2373,8
Sharp	352,4	547,2	690,8	690,8	1205,1	2239,7
Toshiba	382,7	383	485	610,4	974,6	1689,2
Panasonic	404	-	496	736,2	1078,6	-
Daewoo	-	-	-	-	-	-
Hitachi	-	-	-	-	1375	-
JVC	-	-	-	641,1	1000,5	1550
HANNspree	625,9	-	1791	1940	2438	-
Pioneer	-	-	-	1592	1680	3013
NEC	-	-	-	-	-	-
Orion	242,5	-	-	-	-	-
Electron	-	-	422	514	-	-

* - estimation

In Ukraine, the range of LCD TVs is very diverse. In order to properly evaluate the pricing policy of the market operators the entire models according to the diagonal must be classified. The main categories which are presented in Chart 5.2.2 were selected.

In each segment of the market (measured by the length of the screen diagonal) different companies show different pricing policy. For example, in the range of TVs up to 21 inches the most expensive products offered by HANNspree, then follow Sony and Panasonic.

In the range of diagonal 22-25 inches the price leaders are Sony, Sharp and Philips (in descending order). Panasonic Products in this segment is not represented.

In the range of 26-29 inches, the first 3 positions on the price took such producers as HANNspree, Sharp and Sony.

In the range of 30-32 inches the leaders are HANNspree, Pioneer Philips. In the segment of large-format televisions (34-42 inches) the price leaders are HANNspree, Pioneer, Sony.

As for TVs over 43 inches the price leader is Pioneer, then follow Sony and Philips. The most budget models presented in the market are produced by JVC.

Thus, HANNspree, Sony and Sharp provide the most expensive products in every form factors of LCD TVs for the TV market of Ukraine. Samsung offers the most average prices in the market. Toshiba and LG offer the lowest prices for its products.

Diagram 5.2.3

Average prices of plasma televisions produced by the leading manufacturers (\$)

Model name	Length of diagonal					
	до 21	22-25	26-29	30-32	34-42	больше 43
Samsung	-	-	-	-	954,2	2168,1
LG	-	-	-	581,5	984,3	1899
Philips	-	-	-	-	1059,5	1404
Sony	-	-	-	-	-	-
Sharp	-	-	-	-	-	-
Toshiba	-	-	-	-	-	-

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Panasonic	-	-	-	-	1336,9	3564
Daewoo	-	-	-	-	575	-
Hitachi	-	-	-	-	-	2597
JVC	-	-	-	-	-	-
HANNspree	-	-	-	-	-	-
Pioneer	-	-	-	-	1847,2	3599
NEC	-	-	-	-	1646,5	4259,5
Orion	-	-	-	-	-	-
Electron	-	-	-	-	-	-

* - estimation

Analysis of prices of plasma display panels was conducted on a similar structure with the analysis of LCD TVs. It should be mentioned that in the segment of plasma TVs manufacturers Sony, Sharp and Toshiba are not represented in the Ukrainian market. Another feature is that a lot of plasma TVs available on the market is concentrated in the segment with 34-42 inches and more than 43 inches.

The most expensive models of plasma TVs are TVs with 34-42 inches produced by Pioneer, then TVs produced by NEC and Panasonic. TVs produced by Daewoo in this segment is the cheapest.

In a segment of more than 43 inches price leaders is NEC, however, in second place is company Pioneer, then Panasonic. The most budget models in this segment are TVs produced by Philips.

5.3. Dynamics of average prices of TVs for the period 2005-2009

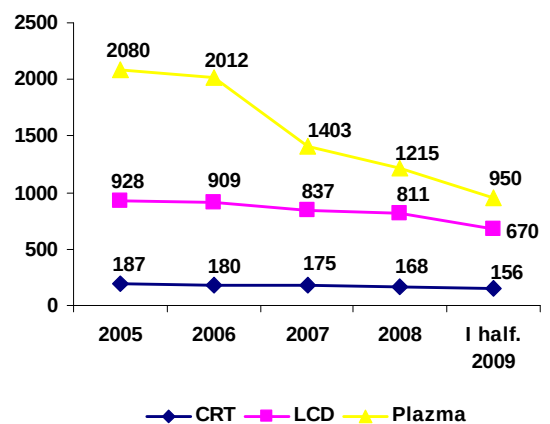
It is worth noting that on the TV market there is a tendency to reduce the prices of all types of TVs. However, the amount of decrease in average price, depending on the type of TV (CRT, LCD or plasma) and it is different.

The most expensive are plasma TVs, but they are not as common as LCD, the price of which is acceptable to most consumers. The most common are CRT TVs, however, the price for them is much lower than on LCD TVs or on plasma TVs.

This is because CRT technology has long been on the market and is technically old, it is not able to fully meet consumer preferences for quality of the image.

Diagram 5.3.1

Dynamics of TVs average prices in 2005 - 2009 (\$)



* - estimation

The smallest price decrease from 2005 was for CRT TVs (from \$ 187 to \$ 156). The decline in this segment estimated as only 16,5%.

Regarding LCD TVs, the situation is different. In the market there was more dynamic decrease in the average prices of similar models. The price in 2005 was \$ 928, and in 1 half of 2009 already estimated as \$ 670. The estimated decrease during this time period was 27,8%.

However, the greatest decrease in average price was estimated in the segment of plasma TVs (from \$ 2080 in 2005 to \$ 950 in 1 half of 2009). The reduction amounted to 54,3%.

The reasons for reducing the average price for different types of TVs are different.

6. Range of products on the market (brands, volumes)

The range of TVs, which are presented on the Ukrainian market is very diverse because on the market there is a serious competition. Generational change for TVs is very fast because the market needs new and better models.

Samsung

CRT TVs. The range of CRT TVs is represented by 22 various models. The price range is between \$ 130 and \$ 350.

LCD TVs

In Ukraine there are 132 models of this type of TVs. They range in price range from \$ 290 to \$ 3780 (average price of a TV with a diagonal 70 inches «Samsung LE70F96BD» is \$ 20200). Price depends on the size of the screen (from 19 to 70 inches), novelty of a model and technology.

Plasma TVs.

Models are represented on the market in number of 34 copies. These TVs are in the price range from \$ 740 to \$ 6150. The size of diagonals represented on the market is from 42 to 63 inches.

LG

CRT TVs. Unlike Samsung LG in the segment of CRT TV is focusing on production of models with a flat screen. Range consists of 25 models in the price range \$ 100 - \$ 420.

LCD TVs.

The range presented by 84 models of TVs. The cost of TV sets in this range from \$ 280 to \$ 2500.

Plasma TVs.

Model range of LG's plasma TVs on the territory of Ukraine includes 31 units. Price range is \$ 540 - \$ 5320. Length of diagonals in the presented models is 32 - 60 inches.

Philips

CRT TVs. Not represented in the territory of Ukraine.

LCD TVs.

In Ukraine Philips sells 86 models of LCD TVs. Price varies from \$ 275 to \$ 4590.

Plasma TVs.

Range includes 3 models with a diagonal length from 42 to 50 inches. Price range is from \$ 980 to \$ 1440.

Sony

CRT TVs. Not represented in Ukraine.

LCD TVs.

Sony as well as Samsung has a very broad model line of TV. At the moment it includes 133 models. Diagonal size varies from 19 to 70 inches. Range of prices - \$ 385 - \$ 5185 (average price of a model 70 inch «Sony KDL-70X3500» is \$ 45,610).

Plasma TVs.

Not represented in Ukraine.

Sharp

CRT TVs. Ukrainian market at the moment consists of 6 models of CRT TVs. Price range is \$ 95 - \$ 350.

LCD TVs. Product Range consists of 59 TVs.

Price range: \$ 303 - \$ 8055 (depending on the size of the diagonal - from 19 to 65 inches). Average price of a model with diagonal 65 inch is \$ 12105.

Plasma TVs.

Not represented in Ukraine.

Toshiba

CRT TVs. Not represented in Ukraine

LCD TVs. Range of products represented in Ukraine includes 42 TVs with diagonals from 15 to 52 inches. These models are in price range \$ 250 - \$ 2605.

Plasma TVs.

Not represented in Ukraine.

Panasonic

CRT TVs. Not represented in Ukraine.

LCD TVs. Represented by a small number of models. Only 10 models of TVs with diagonal size from 20 to 32 inches are represented in Ukraine. Price range of these products varies from \$ 405 to \$ 1270.

Plasma TVs. Unlike LCD TVs, plasma analogues are represented in Ukraine market by a wide range of TVs - 37 units. Diagonal size is up to 103 inches (average price of TV with 103 inches - «Panasonic TH-103PF10RK» is \$ 38260). Price range varies from \$ 770 to \$ 38260.

Daewoo

CRT TVs.

This producer has the widest range of products in this segment. It includes 6 models.

LCD TVs.

Not represented in Ukraine.

Plasma TVs.

Represented by one model, which costs \$ 575.

Hitachi

CRT TVs. Not represented in Ukraine.

LCD TVs. Represented by one model - Hitachi L42X01A, average price is \$ 1375.

Plasma TVs. Represented by a model called Hitachi P50X01A. Average price is \$ 2597.

JVC

CRT TVs. Range includes 7 models of TVs.

LCD TVs. Models diversity has 15 TVs.

Price range varies from \$ 479 to \$ 1,591 depending on diagonal size and technical characteristic.

Plasma TVs. Not represented in Ukraine.

HANNspree

CRT TVs. Not represented in Ukraine.

LCD TVs. Presented only LCD displays with original design (usually they have small size 9,6-15 inches). There are 18 models on the market. Price range is - \$ 111 - \$ 2438.

Plasma TVs. Not represented in Ukraine.

Pioneer

CRT TVs. Not represented in Ukraine.

LCD TVs. Company presents 3 models in price range from \$ 1592 to \$ 3013 depending on a model.

Plasma TVs.

There are 18 models of plasma TVs on the market of Ukraine. Prices lie in the range - \$ 1716 - \$ 7575.

NEC

CRT TVs. Not represented in Ukraine.

LCD TVs. Not represented in Ukraine.

Plasma TVs. The TVs range of NEC represents 6 models on the market. Their price range - \$ 1633 - \$ 6075.

Orion

CRT TVs. Represented in all categories of CRT TVs. Price range varies from \$ 85 to \$ 221. There are 7 models of TVs of the kind.

LCD TVs. There are 2 products on the market (Orion LCD1926 and Orion LCD2028). Average price is \$ 226 - \$ 259.

Plasma TVs. Not represented in Ukraine.

Electron

CRT TVs. Assortment of these TVs is much wider than LCD panels. There are 20

models of TVs of the kind. Models are in the price range: \$ 115 - \$ 247.

LCD TVs. Range includes 7 models. Prices of products vary from \$ 422 to \$ 515.

Plasma TVs. Not represented in Ukraine.

7. Consumption of goods

It can be said that LCD TVs have finally replaced the outdated CRT TVs. It happened on the market of Russia as well as on the Ukrainian market. CRT still has high popularity, but mainly due to low prices and availability. At the moment more consumers prefer to buy expensive, but much more «advanced» LCD TV. It should be mentioned that sales of CRT TVs take place in ordinary stores, while LCD TVs is mainly sell through online stores. The reason of this lies in the fact that CRT TVs buy people, who are far from technology development; often these people don't have an access to the Internet.

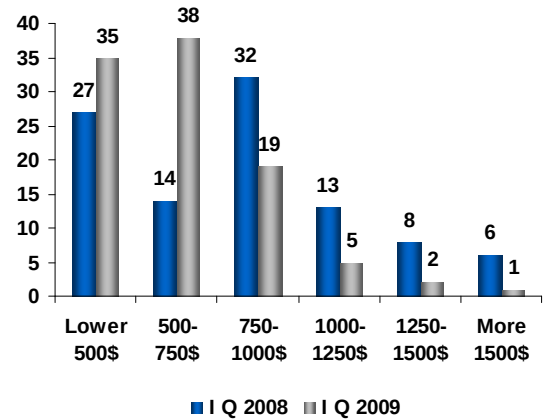
Plasma TVs are gaining popularity thanks to the good image, excellent viewing angles, lack of tail area in dynamic scenes and possibility of production models with a diagonal size more than 60 inches. However, there are some disadvantages: short lifetime (about 20 thousand hours of continuous operation), burnout of pixels when using static image, as well as the weight of panels, which causes inconvenience when installing it. Moreover, built-in cooling fans utter faint noise, which becomes especially noticeable after three hours of continuous operation.

There is a slight increase in the market of projection equipment. Now, projectors can be bought not only by companies for the office presentations but also by ordinary users who want to create home theaters. However, the percentage of those buyers is still very low.

However, the economic crisis still left a negative impact on the TV market. This is mainly affected the development and application of new technologies. Manufactures do not want to risk and they are slow to invest big money into research. For example, investment in such a promising but expensive technology as OLED was reduced.

Diagram 7.1

Changes of customer preferences about prices when buying LCD TVs during the year, %

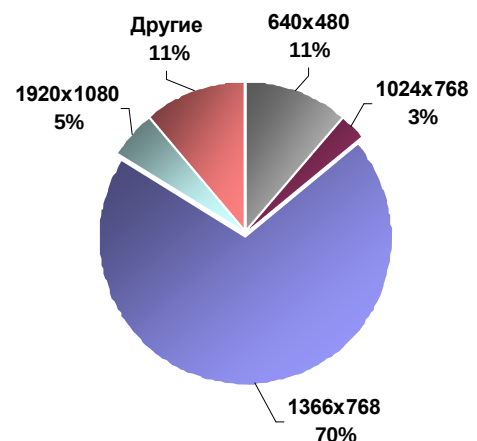


Source: Contracty

Accordingly, these TVs (TVs which is in requisition now) can be divided into 3 price categories: low (below \$ 750), medium (from 751 \$ to 1500 \$) and high (more than 1501 \$). The most popular category at the moment is the low price category.

Diagram 7.2

Distribution of consumer preferences according to the screen resolution



* - estimation

The most popular resolution for consumers is 1366x768. The percentage of consumers who choose this screen resolution is 70% (this is the best for watching DVD movies and TV broadcasts). Resolution with the size 1920x1080 gives to a user the most comfortable view for watching programs or movies, but it takes only 5% in consumer preferences. A reason for this distinction is the high price of devices that support such screen resolution.

It should be mentioned that in case of price reduction for TVs with resolution 1920x1080 pixels, as well as elimination of

defects, the number of consumers who may choose TVs with this screen resolution will grow.

Below there is a rating of the most popular TVs produced by the main producers in stores as well as their price range:

Samsung

CRT TVs.

Samsung CS-29A730 (\$234–450); Samsung CS-29Z58HY (\$238–455); Samsung CS-29Z57 (\$245–394).

LCD TVs.

Samsung LE19A650A1 (\$306–500); Samsung LE32B350 (\$422–588); Samsung LE32B450 (\$475–670); Samsung LE32B551A6W (\$595–829); Samsung LE40B530 (\$809–1096); Samsung LE40B550 (\$855–1106).

Plasma TVs.

Samsung PS-42B450 (\$740–960); Samsung PS-42A451P1 (\$725–1110); Samsung PS-50A450P2 (\$990 – 1670).

LG

CRT TVs.

LG 15FJ4RB (\$99–123); LG 29FS7RLX (\$208–292); LG 29FS6RNX (\$228–390); LG 29FS4RNX (\$234–385).

LCD TVs.

LG 22LU4000 (\$350–453); LG 32LG2000 (\$455–685); LG 32LG4000 (\$531–839); LG 37LH7000 (\$910–1053).

Plasma TVs.

LG 42PG2000 (\$665–1108); LG 42PG6000 (\$786–1495); LG 60PS7000 (\$3119–3468).

Philips

LCD TVs.

Philips 22PFL3404 (\$337–467); Philips 32PFL5404H (\$527–711); Philips 32PFL5604H (\$648–879); Philips 37PFL9604H (\$1301–1542); Philips 42PFL9703D (\$1668–2525).

Plasma TVs.

Philips 42PFP5332 (\$769–1163).

Sony

LCD TVs.

Sony KDL-19L4000 (\$348–436); Sony KDL-32V5500 (\$725–990); Sony KDL-32W5500 (\$830–1202); Sony KDL-40W5500 (\$1125–1676); Sony KDL-52W4000 (\$1575–2055); Sony KDL-46Z4500 (\$1625–2403).

Sharp

CRT TVs.

Sharp 21QF2U (\$129–145); Sharp 21SFX10U (\$154–174).

LCD TVs.

Sharp LC-20S5E (\$295–540); Sharp LC-32DH77E (\$785–968); Sharp LC-46X8E (\$1150–1541); Sharp LC-52HD1E (\$2440–3156).

Toshiba

LCD TVs.

Toshiba 19AV605PR (\$287–375); Toshiba 37AV500PR (\$615–860); Toshiba 42AV500PR (\$750–1222); Toshiba 40XF350PR (\$1074–1899).

Panasonic

LCD TVs.

Panasonic TX-R32LX80 (\$508–720); Panasonic TX-R32LX85 (\$740–1125); Panasonic TX-R37LX85 (\$825–1470).

Plasma TVs.

Panasonic TH-R42PV80 (\$756–1380); Panasonic TH-R42PV8 (\$715–1141); Panasonic TH-R46PY80 (\$1240–2500).

Daewoo

CRT TVs.

Daewoo KR-2930N (\$241–283); Daewoo KR-2930MT (\$242–283).

Plasma TVs.

Daewoo DPP-42H9 (\$575–925).

Hitachi

LCD TVs.

Hitachi L42X01A (\$1300–1450).

Plasma TVs.

Hitachi P50X01A (\$2550–3671).

JVC

CRT TVs.

JVC AV-1401UB (\$90–119); JVC AV-2131QB (\$166–202).

LCD TVs.

JVC LT-32BX38 (\$535–630); JVC LT-32FX38 (\$489–965).

HANNspree

LCD TVs.

HANNspree HANNsa.red (\$378–870); HANNspree HANNslounge 26 (\$1620–1800).

Pioneer

LCD TVs.

Pioneer KRL-32V (\$1160–1695).

Plasma TVs. Pioneer PDP-5080XD (\$1850–2199); Pioneer PDP-508XD (\$1934–2369).

NEC

Plasma TVs.

NEC PlasmaSync 50XP10 (\$1970–3500).

Orion

CRT TVs.

Orion STP1525FL (\$95–117); Orion SPP2920FL (\$194–224).

LCD TVs.

Orion LCD2028 (\$229–357).

Plasma TVs.

Electron

CRT TVs.

ELECTRON 54TK-703 slim (\$123–145).

LCD TVs.

ELECTRON 81TK-980 (\$453–560).

8. Distribution channels

Sales channel (or sales) is a way which goods use during the sales process from supplier to consumer. For distribution management the most important strategic decisions are to choose a distribution channel structure. Making this decision the manufacturer actually predetermines the success or failure of promotion of a trademark on the market.

But also there are some reasons for the slow growth of goods sales. They include these reasons:

- delays because of production facilities expansion;
- some technical problems (improve of technology);
- delays in bringing the goods to consumers through retail outlets;
- reluctance of consumers to change familiar patterns of behavior.

In case selling of costly novelty such as TV with a high resolution the growth in sales is constrained by several other factors. One of them is that there is few consumers who can afford to buy a new product.

When a company introduces new products, it usually bears losses or receives small profit due to low sales and high costs of distribution management and advertising. Work with sales representatives also costs dearly. During this period the size of ratio between promotion costs and sales is the biggest because it is necessary to:

- inform potential customers about a new product, which is unknown yet;
- persuade them to test products and provide sales through retailers.

Main efforts on selling goods a company directs to attract consumers who are most prepared to make a purchase. Usually these consumers are members of a group with high income. In addition, prices at this stage are high because of:

- high costs caused by the relatively slow growth of production;
- technological problems arising at the stage of development of production;
- high trade margins necessary to cover the high costs of promotion activities, which are essential to increase growth in sales.

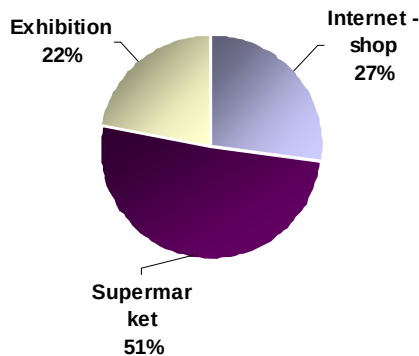
Many manufacturers are working with the assistance of other companies who bring goods to the market and manage a distribution channel.

There are 3 main sales channels for TVs. These include the following: retail sales through online retailers, large supermarket chains of electronics, as well as the signing of contracts at the major exhibitions of household appliances.

Internet shops attract consumers with the help of lower prices than in electronics stores. Price is reduced due to fewer staff than in large supermarkets and less deductions for employees' wages. Weaknesses include relatively small volumes of sales, logistical difficulties and delays with goods delivery.

Diagram 8.1

Structure of TVs sales through the main distribution channels, %



* - estimation

The largest international exhibitions include:

CES (Consumer Electronics Show) in Las Vegas;

International 3GSM - Congress in Barcelona;

The world's information technology, software, telecommunications, services, and CTI - solutions) in Hanover;

IFA (International Franchise Association) in Berlin.

Existing distribution channels can be ranked in order of decline following way:

1. Special exhibitions;
2. Large supermarkets of electronics;
3. Internet - shops.

Each of them has its advantages.

For example, as a rule at trade shows to sign contracts to supply large quantities of equipment between manufacturers and distributors or representatives in various regions. Weaknesses include the logistical problems and additional costs for the presentation.

In large supermarkets there are shop assistants who help customers to choose the right model of a TV. Weaknesses include usually overcharge for products, some supermarkets sell mainly cheaper TVs.

9. Summary. Forecast for the market capacity until 2011

Summary

During market development of TVs in Ukraine and in the world producers make some changes to accents attributed its products.

Producers tried to demonstrate models with the largest diagonal size to consumers in 2005-2006. One of the major trends in the market in 2007-2008 was the thickness of the proposed models. All brands tried to provide thin LCD panels or TVs based on organic light emitting diodes (OLED - Organic Light Emitting Diode).

Most manufacturers have relied on green TVs in 2009, reducing their energy intensity, convergence of television and the Internet. For example, the level of electricity consumption in some models of Sharp's TVs is now up to 60W.

There was also a stable tendency to develop three-dimensional television (3D). To use these TVs, you need to wear special glasses (for consumers with poor eyesight it would be difficult to do). Nevertheless, despite these difficulties, manufacturers do not stop in an effort to develop this area. Such trends will lead to the development of 3D-content: movies, games, etc.

It should be mentioned that such TVs need a three-dimensional video signal, which must make serious adjustments in production of sources of this signal. This can lead to slow implementation of this technology on the market.

On the other hand, the most promising and advanced technology OLED displays was left without proper attention. This technology is very capital intensive since it requires large financial infusions in the research and in the market in future. Not the least role in this issue played the global financial crisis which reduced the income of the leading manufacturers of TVs. It was one of the reasons why investment in the development of OLED technology is deferred until more suitable time.

Despite these difficulties, it is worth mentioning that LCD TVs with LED backlight technology will become the most popular product in the Ukrainian TV market in the near future

However, it should be mentioned that the price of such technological devices will be significantly higher than price on ordinary LCD TVs (up to 50% more expensive, depending on the model and manufacturer). Therefore, despite large potential of the market, sales of such TVs will be limited because of low level of solvency.

Sharp increase in consumption of OLED TVs (the most priority direction of the Ukrainian TV market) is possible only with resumption of lending money by banks at pre-crisis levels or in case of price reduction.

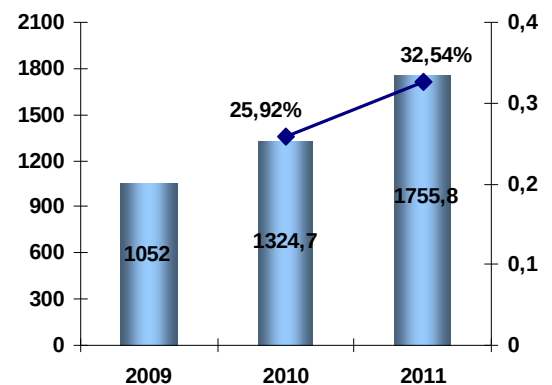
Forecast for the market capacity in 2011

It is worth mentioning that in the period from 2009 to 2011 domestic TV market will grow.

By the end of 2009 the market will not develop actively. The first reason for this – the market will be affected by the global crisis. The other reason is unsold products on warehouses.

Diagram 9.1

Forecast for the domestic TV market in 2009-2011, thousand units



* - estimation

Resumption of the foreign manufacturers' expansion on the Ukrainian market is expected in 2010. Growth of the market could reach 26%. Resumption of model lines of the main producers on the market and increase of competition among operators is also expected. These factors will positively affect the volume growth of the market.

These major trends will also be relevant in 2011. It is expected to increase the market capacity to 32,5% (comparing to 2010) during this period. The increase will be occurred because of lower impact of crisis on the Ukrainian economy; the public confidence to the banking system will also increase and as a result of this – increase of lending to the population (consumer loans). However, it is not expected to reach market capacity of pre-crisis level.

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